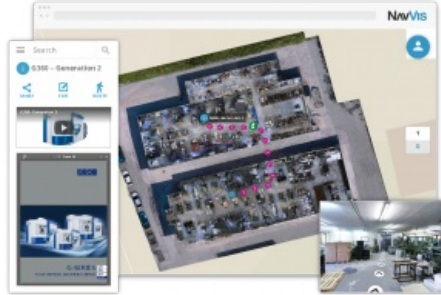


# How to Deliver Indoor Routing with Every Building Scan Project



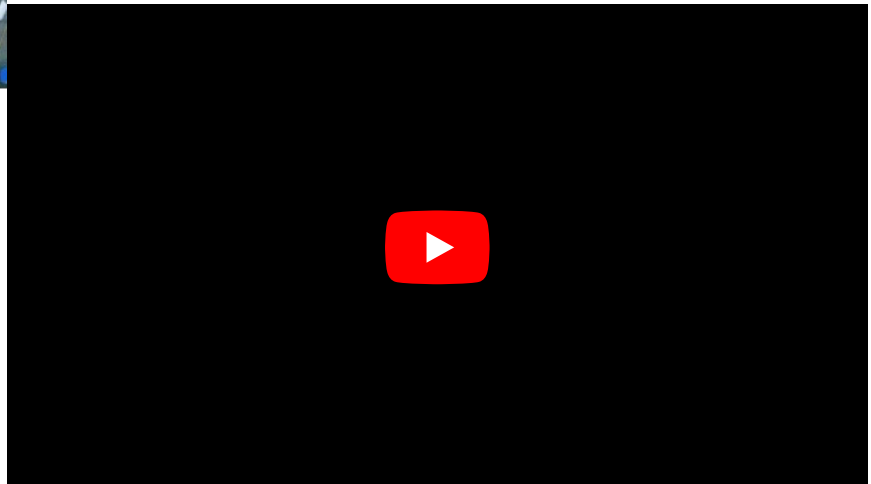
Delivering web-based routing applications based on point clouds adds value to every building scan project. In this blog, the author shows you what it looks like and how it's possible. You'll be surprised at how easy it is.

If you're a laser scanning professional who pitches 3D scanning services for buildings, you understand how important it is to demonstrate the value of as-built documentation. That includes helping prospective clients recognize an opportunity to improve building management and operations, with deliverables that are both innovative and up to date.

Indoor routing is an excellent example of improved building management and operations. Anyone who has ever

struggled to find a meeting room, first-aid station, or even a machine that needs servicing will immediately see the value of being able to quickly search for an object or location and then have detailed routing information.

This is precisely the kind of value that laser scanning professionals can deliver using [NavVis IndoorViewer](#) software. In this blog post, we'll show you how to use this state-of-the-art capability, and take a deep dive into the technology that makes it possible.



## The advantages of indoor routing with NavVis IndoorViewer

NavVis IndoorViewer is a web-based 3D visualization software that turns the data captured by laser scanners into fully immersive digital buildings, combined with intuitive features which allow users to easily interact with the 3D scan data – and enhance it.

The software includes a routing function, which makes it possible for users to find important information, objects, and locations within a scanned building.

These searchable, detailed, and fully customizable routing paths enable users to move virtually through the digital building as if they were on-site. The end-user clicks on their destination, and the most convenient path is generated automatically.

Both time estimation and distance are provided, together with special directions such as stairs and elevators. And for complete versatility,

these pathways are viewable from both 3D and 2D perspectives.



Users can move virtually through the building as though they were on-site, viewable from either 2D...



...or 3D perspectives. You have the power to choose.

## How to deliver indoor routing with every scan project

To get started in creating indoor routing, you'll need a subscription to NavVis IndoorViewer and point clouds captured using the [NavVis M6 Indoor Mobile Mapping System \(IMMS\)](#).

If you don't have a subscription to NavVis IndoorViewer already, [sign up for your free trial today](#). Alternatively, feel free to contact us to arrange a [hands-on demo of the NavVis M6 IMMS](#).



Behold, the navigation graph in all its glory: the navigation graph forms the basis for indoor routing.

The routing functionality in NavVis IndoorViewer is based on a navigation graph, which is automatically generated for point clouds that contain surface normals.

NavVis IndoorViewer includes an editing function for these navigation graphs, so advanced users can further customize the routing paths. Using the path drawing tool, for example, makes it incredibly easy for users to extend the navigation graph by drawing routing paths anywhere within the 2D map view. This includes the unscanned areas surrounding the building datasets that appear on the map, as well as datasets for which a navigation graph could not be automatically generated.

To use the path drawing tool, simply click on a node to specify a starting point for your path, and then draw a path by clicking each time you want to place a node. When you have finished drawing your path, click done, and you've essentially created a virtual route.



The Path Drawing Tool extends the routing functionality by enabling users to draw routing paths anywhere within the 2D map view.

## Wrapping up

The routing function in NavVis IndoorViewer ensures that users will always be able to find important objects and locations. And laser scanning professionals can deliver this powerful feature as part of every building scan project. In just a few clicks, you can convert a building scan into a web-based application that provides users with searchable, highly detailed routing information.

Bookmark this blog for more posts in the series about the unique ways our market-leading software can enhance the great indoors. Better yet, [subscribe to our monthly newsletter](#).

In the meantime, if you're curious to learn more about either the NavVis IndoorViewer or the NavVis M6 IMMS, [sign up here for a free trial](#) or [arrange a demo](#). We look forward to hearing from you.

**What's a navigation graph?** *The navigation graph provides the basis for indoor navigation and routing. It consists of a set of locations or nodes connected via edges. The nodes represent possible user locations while the edges represent the routes that a user can potentially take within the mapped building.*

The [original version](#) of this blog was published on the NavVis website.

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<https://www.gim-international.com/content/blog/how-to-deliver-indoor-routing-with-every-building-scan-project>

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